INSTALLATION INSTRUCTIONS

Flanged Globe Valves 2½" to 6"

Pressure Compensated
G6…C Series

G6…C	**Two-way Pressure Compensated**
G6…CS	**Two-way Pressure Compensated Stainless Steel Trim**
G6...LCS	**Two-way Pressure Compensated Stainless Steel Trim Linear Characteristic**

2½" to 6"

Service	**Chilled/hot water, 60% glycol, steam**
C_v Range	**65 – 344**
Material	**Stainless steel stem, Bronze plug or Stainless plug**
Control	**On/Off, Floating Point Multi-Function Technology® Electronic Fail-Safe or Non-Spring Return**

FEATURES

- Balanced Plug Design
- Spring Return Solutions for up to 6" Valves
- Bronze or Stainless Trim

BENEFITS

- Perfect for high close-off requirements
- Fail-safe on larger valves
- Covers wide range of operating temperatures
- Modified equal percent (G6C) (G6CS) or linear characteristic (G6LCS) for steam applications

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Electronic
G6…C(S), G7…(S) Series

G6…C(S)-250	**Two-way Flanged ANSI 250 Bronze or Stainless Trim**
G7…(S)	**Three-way Flanged Bronze or Stainless Trim**
G7…(S)-250	**Three-way Flanged ANSI 250 Bronze or Stainless Trim**

Three-way Valves available in Mixing or Diverting

2½" to 6"

Service	**Chilled/hot water, 60% glycol, steam (G6C)**
C_v Range	**65-344** (Two-way) **68-340** (Three-way Mixing) **68-248** (Three-way Diverting)
Material	**Stainless steel stem, Bronze plug or Stainless plug**
Control	**On/Off, Floating Point, 2-10 VDC** **Multi-Function Technology®** **Electronic Fail-Safe or Non-Spring Return**

FEATURES

- Complete flanged product range
- Mixing or diverting options
- Multi-Function Technology®
- ANSI 125/ANSI 250

BENEFITS

- Fits wide range of applications
- Capable of any control signal
- Suitable for piping systems

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Warning!

Valve should not be used for combustible gas applications. Gas leaks and explosions may result. Do not install in systems which exceed the ratings of the valve.

- Avoid installations where valve may be exposed to excessive moisture, corrosive fumes, vibration, high ambient temperatures, elements, or high traffic areas with potential for mechanical damage.
- Valve assembly location must be within ambient ratings of actuator. If the temperature is below -22°F, a heater is required.
- The valve assembly will require heat shielding, thermal isolation, or cooling at the actuator if combined effect of medium and ambient temperatures (conduction, convection, and radiation) is above 122°F for prolonged time periods.
- Strainers should be installed before coil and valve.
- Visual access must be provided. Assembly must be accessible for routine service. Contractor should provide unions for removal from line and isolation valves.
- Avoid excessive streses. Mechanical support must be provided where reducers have been used and the piping systems may have less structural integrity than full pipe sizes.
- Vertical pipes with valves and dual actuators may require support for linkage.
- Sufficient upstream and downstream piping runs must be provided to ensure proper valve capacity and flow response. Five diameters in each direction are reccomended.
- Life span of the valve stems and packing is dependent on maintaining non-damaging conditions. Poor water treatment or filtration, corrosion, scale or other particulate can result in damage to trim components. A water treatment specialist should be consulted.

1. Inspect shipping package, valve, linkage, and actuator for physical damage. If shipping damage has occurred, notify appropriate carrier. Do not install.
2. If this is a replacement, remove the existing valve, linkage, and actuator from the piping system.
3. If actuator and linkage are removed, they must be reinstalled correctly. The actuator must be rotated so that the valve seats properly for close-off.
4. Install valve with the proper ports as inlets and outlets. See piping charts on next page. Check that inlet and outlet of 2-way valves are correct; check that the "A", "B", and "AB" ports of 3-way valves are piped correctly. Flow direction arrows must be correct.
5. Blow out all piping and throughly clean below valve installation.
6. clean male pipe threads with wire brush and rag. If threads have been damaged or exposed to weather, running a tap or die over the threads may straighten them. Clean pipes, threads, and valve threads before installation. Check for any foreign material that can become lodged in trim components. Strainers should be cleaned after initial startup.
7. Pipe sealing compound may not be applied to either flange or gasket.
8. Flanged bodies must be used with flanges which are rated for the service. 125 lb. flanges have flat faces and may not be bolted to raised face flanges. Gaskets rated for the medium and temperature-pressure must be used.
9. Valve must be installed with the stem towards the vertical, not below the horizontal.
10. Tighten bolts alternatively and evenly around the flange.
11. 2-way valve Normally Open (NO) or Normally Closed (NC) configurations must be verified by examining both the mechanical drawings and the valve and actuator.
12. 3-way valve Normally Open (NO) or Normally Closed (NC) configurations for the control port and the bypass port must be verified by examining both the mechanical drawings and the valve and actuator.

Check specifications for every application to be sure of ports and designations.

U, L, and C designations

U is for Upper, the control port.
L is for Lower, the bypass port.
C is for Common.

Viewed with the bonnet upwards ad the U port on the left, the L port is the bottom port, and the C is the right port. With the stem up, L is open to Common. With the stem down, U is open to Common.

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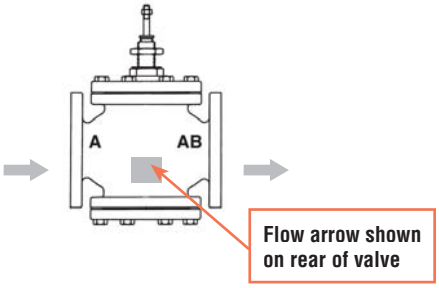
Flanged Globe Valves 2½" to 6"

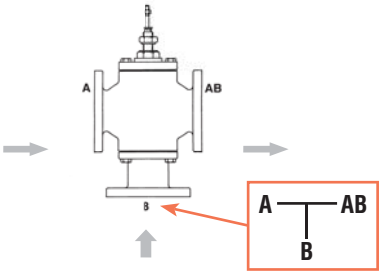
Installation Instructions

FLOW PATTERN – Flow Pattern is Marked on Valve

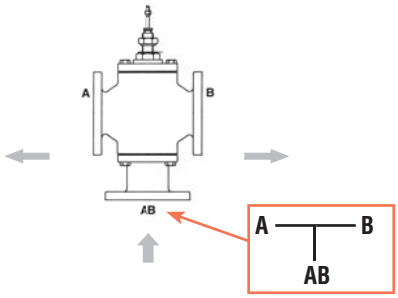
G6 2-way Valve
Stem Up = Open A to AB



G7 3-way Mixing Valve
Stem Up = Open B to AB



G7…D 3-way Diverting Valve
Stem Up = Open AB to B



VALVE ASSEMBLY SET-UP

		2-WAY VALVE		3-WAY VALVE	
		SPECIFY UPON ORDERING	SPECIFY UPON ORDERING	SPECIFY UPON ORDERING	SPECIFY UPON ORDERING
NON-SPRING RETURN STAYS IN LAST POSITION	EV, RV Series	**NC:** Normally closed A to AB, valve will open upon increase in signal/power. Note: To change valve to A to AB open, reverse the directional switch in actuator.	**NO:** Normally open A to AB, valve will close upon increase in signal/power. Note: To change valve to A to AB closed, reverse the directional switch in actuator.	**NC:** Normally closed A to AB, will open upon increase in signal/power. Note: To change valve to A to AB open, reverse the directional switch in actuator.	**NO:** Normally open A to AB, will close upon increase in signal/power. Note: To change valve to A to AB closed, reverse the directional switch in actuator.
SPRING RETURN NOTE FAIL POSITION	AFB, AFX Series On/Off	**NO/FO** Normally open A to AB valve will drive closed. Spring Action: Will fail open A to AB upon power loss.	**NC/FC** Normally closed A to AB valve will drive open. Spring Action: Will fail closed A to AB upon power loss.	**NO/FO** Normally open A to AB valve will drive closed. Spring Action: Will fail open A to AB upon power loss.	**NC/FC** Normally closed A to AB valve will drive open. Spring Action: Will fail closed A to AB upon power loss.
	AFB, AFX MFT Series	**NC/FO** Normally closed A to AB, valve will open upon increase in signal. Note: To change valve to A to AB open, reverse CW/CCW switch. Spring Action: Will fail open A to AB upon power loss.	**NO/FC or NC/FC** Normally Open/ Normally Closed: valve can be open or closed, will drive closed or open A to AB (can be chosen with CW/CCW switch). Spring Action: Closed A to AB upon power loss. **NO/FO** Normally open A to AB Spring Action: Will fail open A to AB upon power loss. (NO or NC action can be chosen with CW/CCW switch).	**NC/FO** Normally closed A to AB, valve will open upon increase in signal. Note: To change valve to A to AB open, reverse CW/CCW switch. Spring Action: Will fail open A to AB upon power loss.	**NO/FC or NC/FC** Normally Open/ Normally Closed: valve be open or closed, will drive closed or open A to AB (can be chosen with CW/CCW switch). Spring Action: Closed A to AB upon power loss. **NO/FO** Normally open A to AB Spring Action: Will fail open A to AB upon power loss. (NO or NC action can be chosen with CW/CCW switch).
ELECTRONIC FAIL-SAFE	AVK, GK Series	**NC/FO** Normally closed A to AB, valve will open upon increase in signal. Note: To change valve to A to AB open, reverse CW/CCW switch. Fail Position: Will default fail A to AB open, from the factory. Fail position can be set from 0%-100%, in 10% increments.	**NO/FC or NC/FC** Valve: Can be open or closed, will drive closed or open A to AB (can be chosen with CW/CCW switch). Fail Position: Will default fail A to AB open, from the factory. Fail position can be set from 0%-100%, in 10% increments. **NO/FO** Normally open A to AB Fail Position: Will default fail A to AB open, from the factory. Fail position can be set from 0%-100%, in 10% increments.	**NC/FO** Normally closed A to AB, valve will open upon increase in signal. Note: To change valve to A to AB open, reverse CW/CCW switch. Fail Position: Will default fail A to AB open, from the factory. Fail position can be set from 0%-100%, in 10% increments.	**NO/FC or NC/FC** Valve: Can be open or closed, will drive closed or open A to AB (can be chosen with CW/CCW switch). Fail Position: Will default fail A to AB open, from the factory. Fail position can be set from 0%-100%, in 10% increments. **NO/FO** Normally open A to AB Fail Position: Will default fail A to AB open, from the factory. Fail position can be set from 0%-100%, in 10% increments.
				3-WAY DIVERTING VALVE	
NON-SPRING RETURN	EV, RV Series			**NC:** Normally closed B to AB, valve will open upon increase in signal/power. Note: To change reverse the directional switch.	**NO:** Normally open B to AB, valve will close upon increase in signal/power. Note: To change reverse the directional switch.
SPRING RETURN	AFB, AFX Series				

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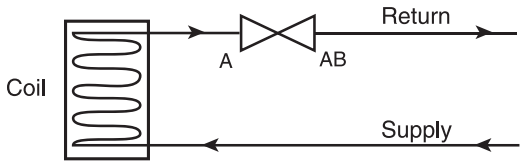
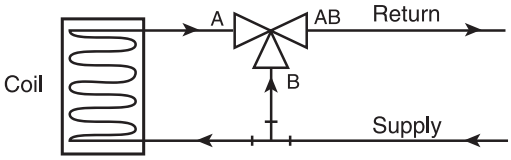
2-WAY

2-way Valve Piping Diagram
(1 Input, 1 Output)

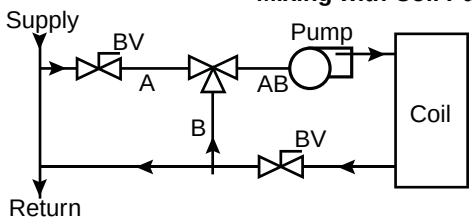


3-WAY MIXING

3-way Mixing Valve Piping Diagram
(2 Inputs, 1 Output)

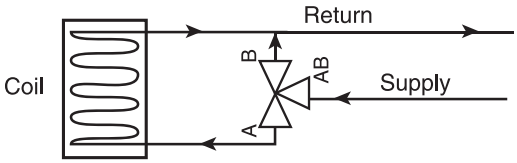


Mixing with Coil Pump



3-WAY DIVERTING

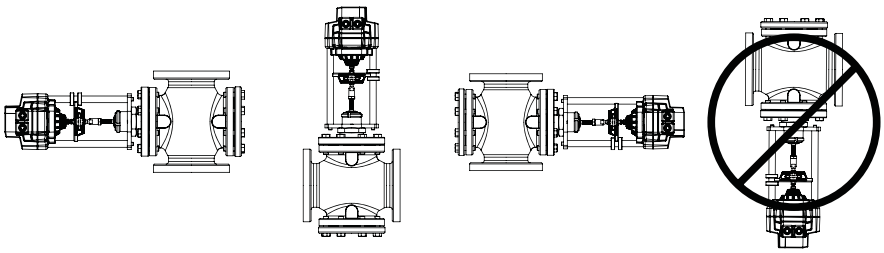
3-way Diverting Valve Piping Diagram
(1 Input, 2 Outputs)



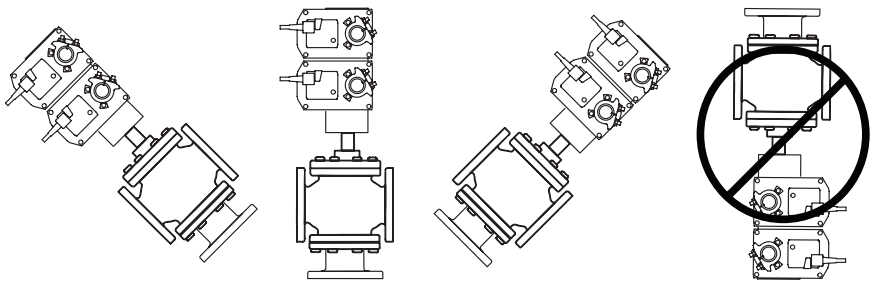
INSTALLATION

Valve must be installed in these orientations only.

Linear Actuators



UGLK Linkage



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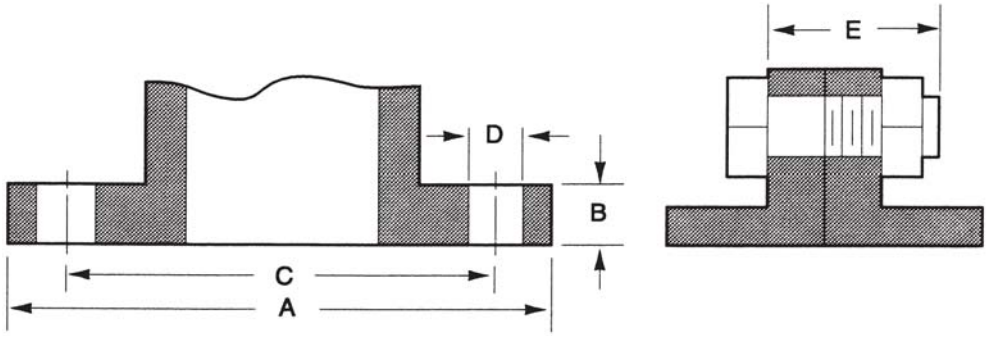
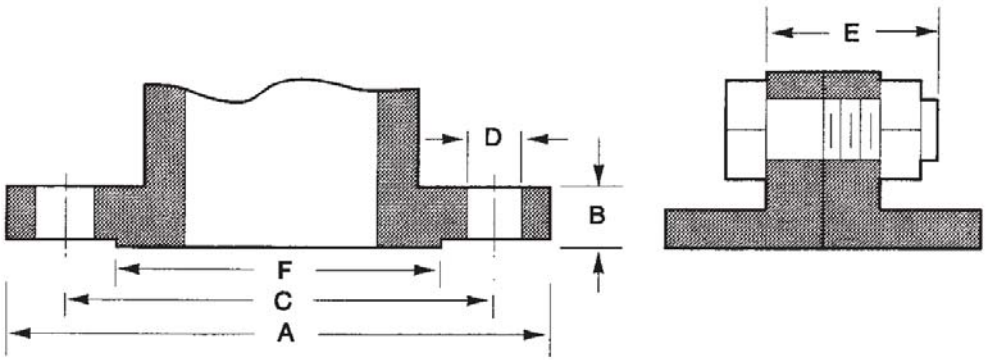
ANSI 125

Flange Detail for American Standard 125 lb. Cast Iron Pipe Flanges									
	FLANGES			DRILLING			BOLTING		
Nominal Pipe Size	A Flange Diameter	B Flange Thickness	C Diameter of Bolt Circle	D Diameter of Bolt Holes	Number of Bolts	Diameter of Bolts	E Length of Machine Bolts
2½"	7 5/16"	11/16"	5½"	¾"	4	⅝"	2½"
3"	7 7/8"	¾"	6"	¾"	4	⅝"	2½"
4"	9"	15/16"	7½"	¾"	8	⅝"	3"
5"	10"	15/16"	8½"	⅞"	8	¾"	3"
6"	11¼"	1"	9½"	⅞"	8	¾"	3¼"



ANSI 250

Flange Detail for American Standard 250 lb. Cast Iron Pipe Flanges									
	FLANGES			DRILLING		BOLTING		
Nominal Pipe Size	A Flange Diameter	B Flange Thickness	F Diameter of Raised Face	C Diameter of Bolt Circle	D Diameter of Bolt Holes	Number of Bolts	Diameter of Bolts	E Length of Machine Bolts
2½"	7½"	1"	4 15/16"	5 7/8"	⅞"	8	¾"	3½"
3"	8¼"	1⅛"	5 11/16"	6 5/8"	⅞"	8	¾"	3½"
4"	10"	1¼"	6 15/16"	7 7/8"	⅞"	8	¾"	4"
5"	11"	1⅜"	8 5/16"	9¼"	⅞"	8	¾"	4"
6"	12½"	1 7/16"	9 11/16"	10 5/8"	⅞"	12	¾"	4"



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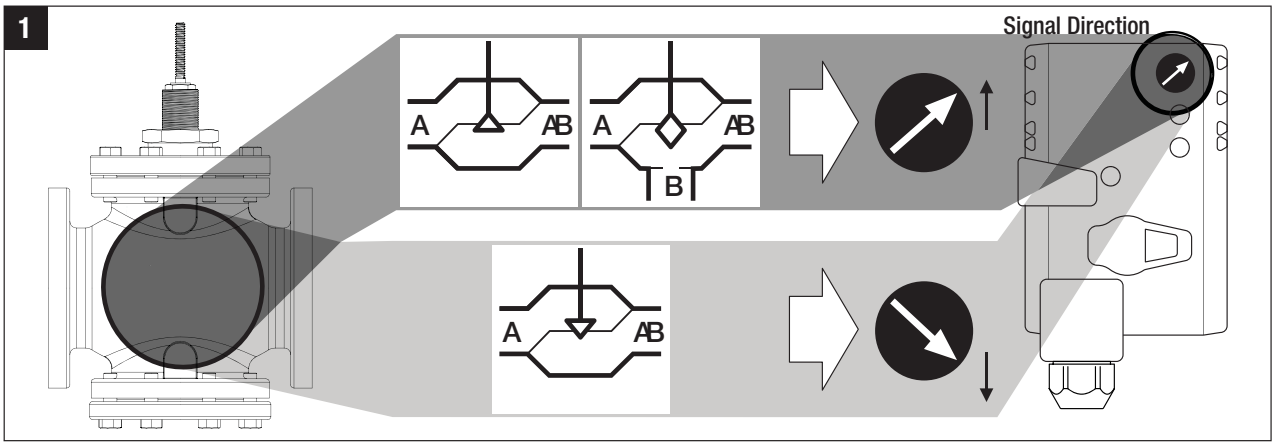

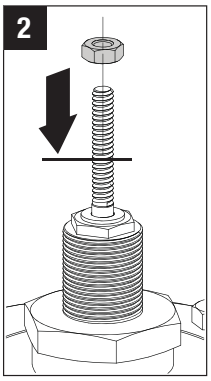

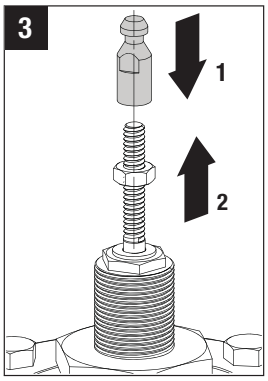

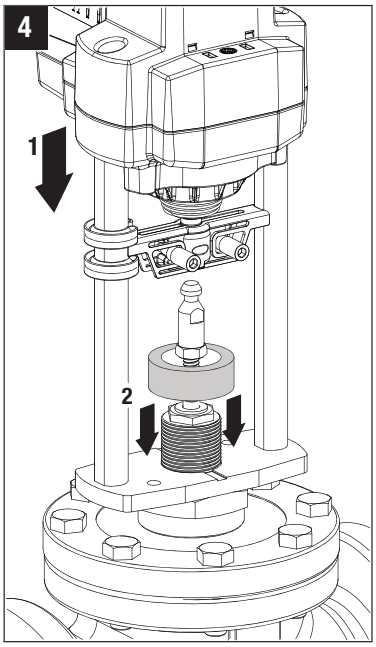

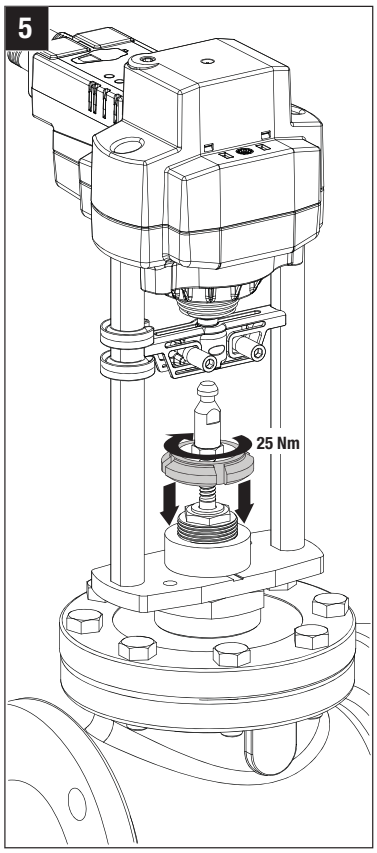

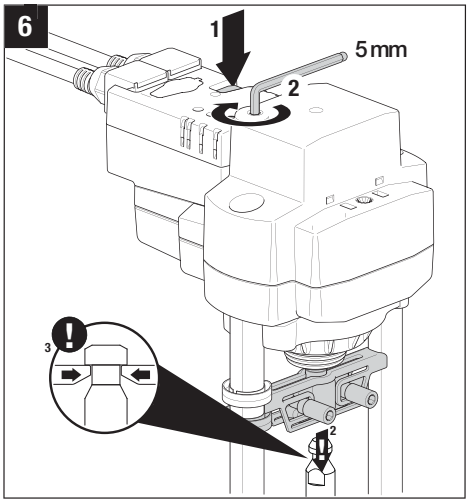

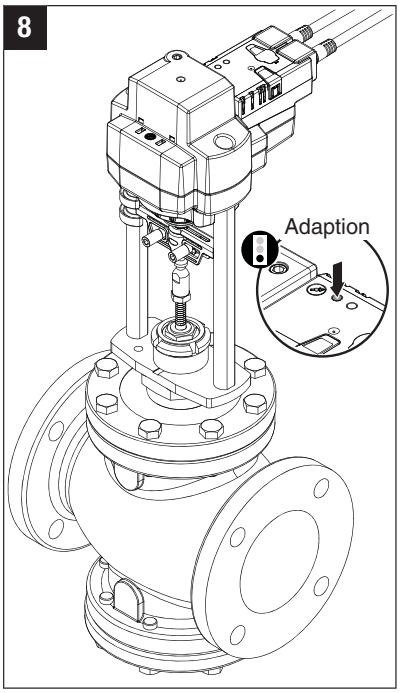

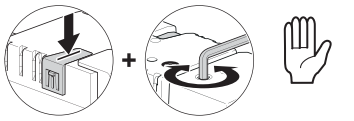

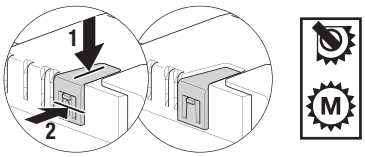

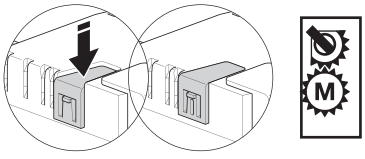

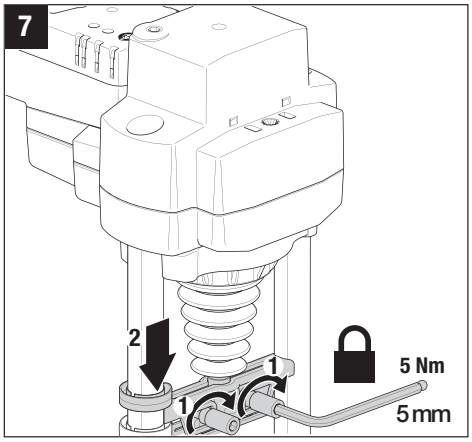

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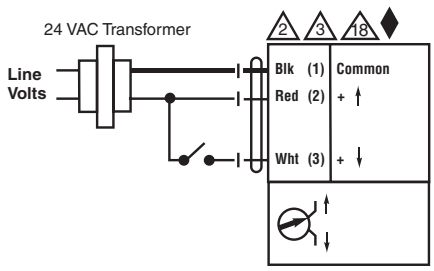
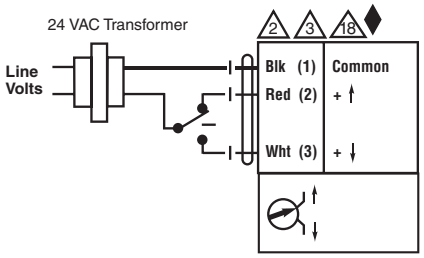
WGVL/G6/G7 Linkage with EV Series Actuators

Wiring Diagrams

Non-Spring Return Actuator with -3

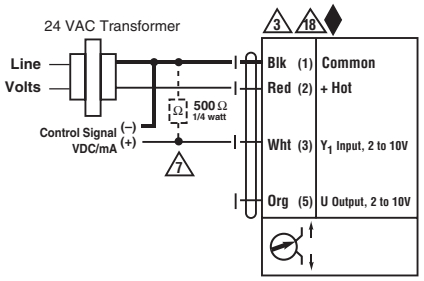


On/Off

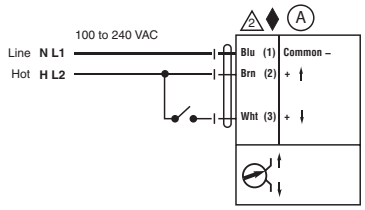


Floating Point

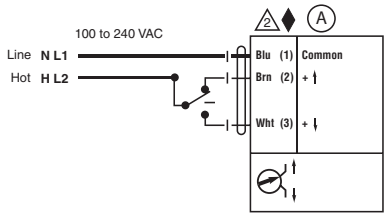
Non-Spring Return Actuator with -SR



VDC / 4 to 20 mA

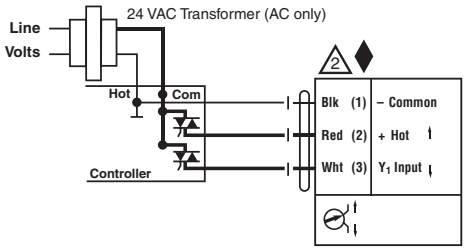


On/Off

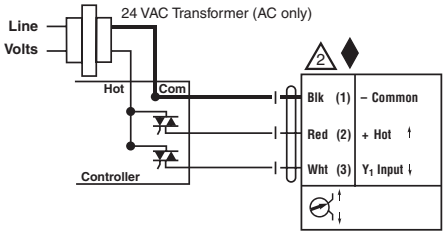


Floating Point

Selector Switches

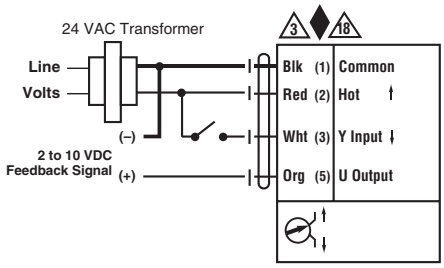


Triac Sink

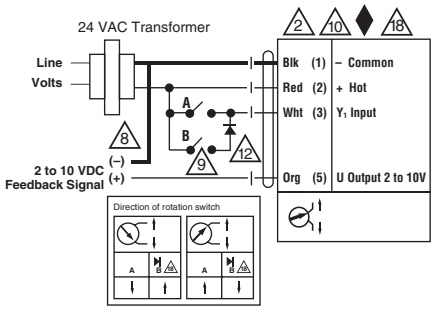


Triac Source

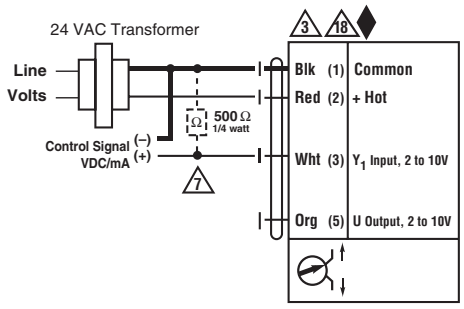
Non-Spring Return Actuator with MFT



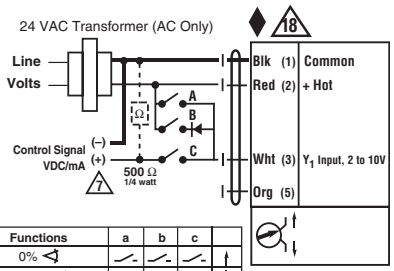
On/Off



Floating Point



VDC / 4 to 20 mA



Functions	a	b	c	
Min* 0%				
Mid* 50%				
Max* 100%				
Normal** Control mode acc. to Y				

* Default selectable 0-100%. See Configuration Data Sheet.
** Customizable. See Configuration Data Sheet.

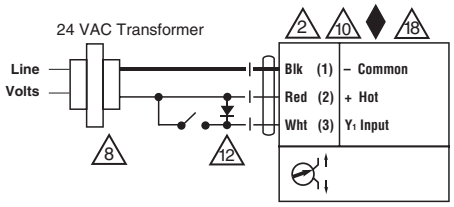
Override Control Min, Mid, Max Postions

Notes:

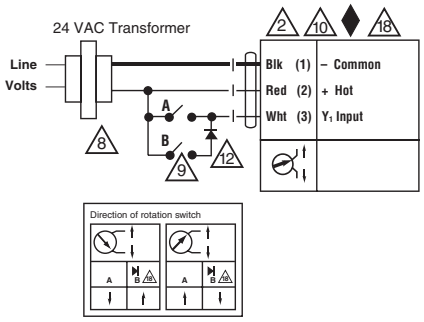
- ♦ Meets cULus requirements without the need of an electrical ground connection
- Ⓐ Actuators with appliance cables are numbered.
- 2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- 3 Actuators may also be powered by 24 VDC.
- 5 Only connect common to neg. (-) leg of control circuits.
- 7 A 500 Ω resistor converts the 4 to 20 mA control signal to 2 to 10 VDC.
- 8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.
- 9 Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.
- 10 For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.
- 12 IN4004 or IN4007 diode. (IN4007 supplied, Belimo Part number 40155)
- 18 Actuators with plenum rated cable do not have numbers on wires; use color codes instead.

BRN Brown Marron Brun Marrom
BLU Blue Azul Bleu Azul
ORG Orange Anaranjado Orange Alaranjado
PNK Pink Rosado Rosa Cor-de ros
WHT White Blanco Blanc Branco
RED Red Rojo Rouge Vermelho
BLK Black Negro Noir Preto

Non-Spring Return Actuator with -3



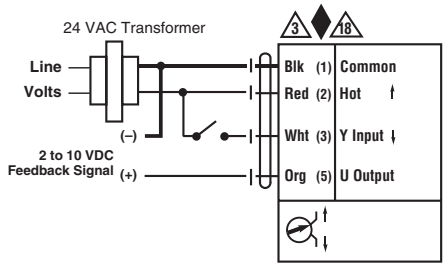
On/Off



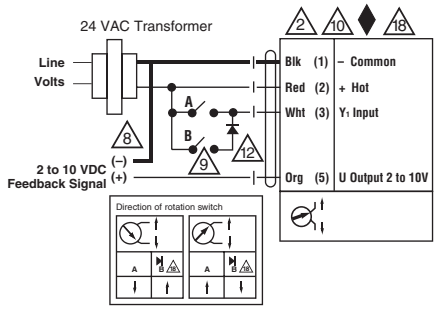
Floating Point

Selector Switches

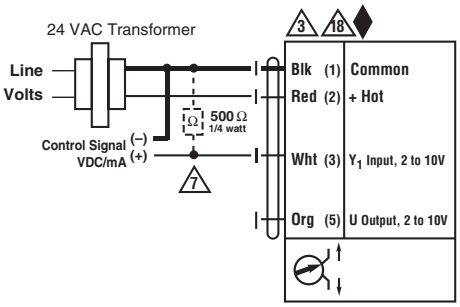
Non-Spring Return Actuator with MFT



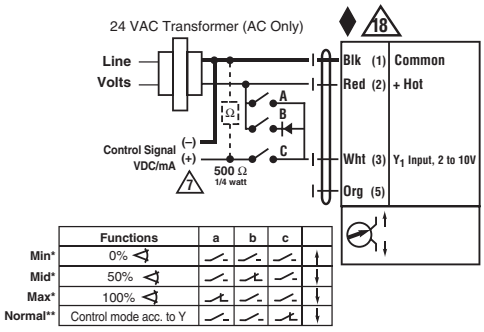
On/Off



Floating Point



VDC / 4 to 20 mA



Functions	a	b	c	
Min* 0%				
Mid* 50%				
Max* 100%				
Normal** Control mode acc. to Y				

* Default selectable 0-100%. See Configuration Data Sheet.
** Customizable. See Configuration Data Sheet.

Override Control Min, Mid, Max Postions

Notes:

- ♦ Meets cULus requirements without the need of an electrical ground connection
- Ⓐ Actuators with appliance cables are numbered.
- △2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- △3 Actuators may also be powered by 24 VDC.
- △5 Only connect common to neg. (-) leg of control circuits.
- △7 A 500 Ω resistor converts the 4 to 20 mA control signal to 2 to 10 VDC.
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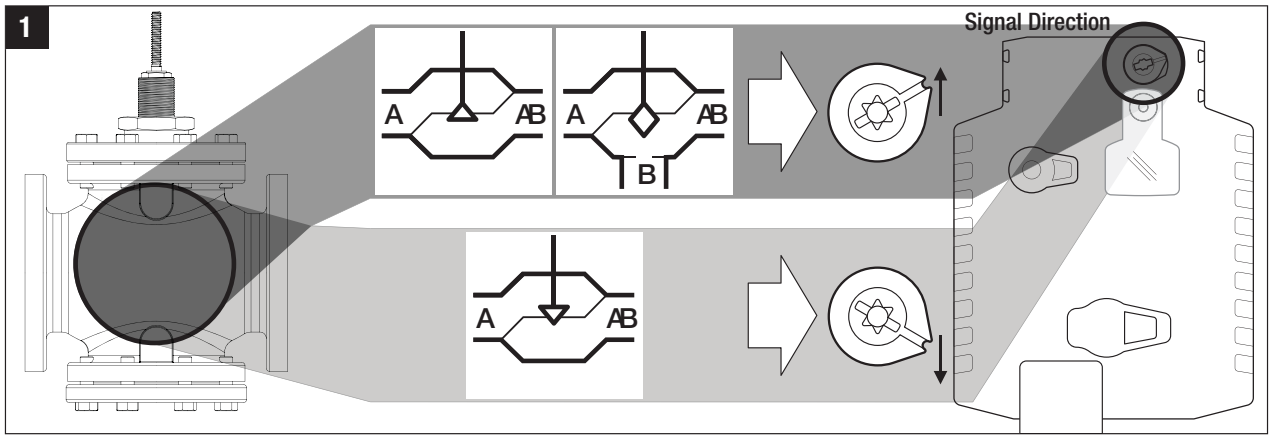
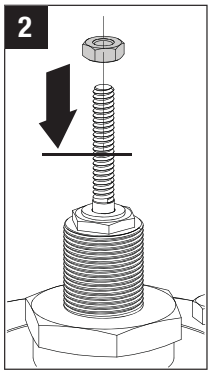
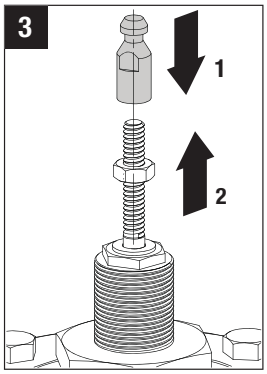
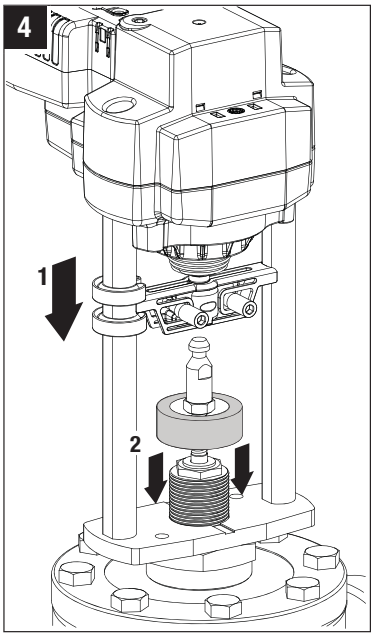
- △12 IN4004 or IN4007 diode. (IN4007 supplied, Belimo Part number 40155)
- △18 Actuators with plenum rated cable do not have numbers on wires; use color codes instead.

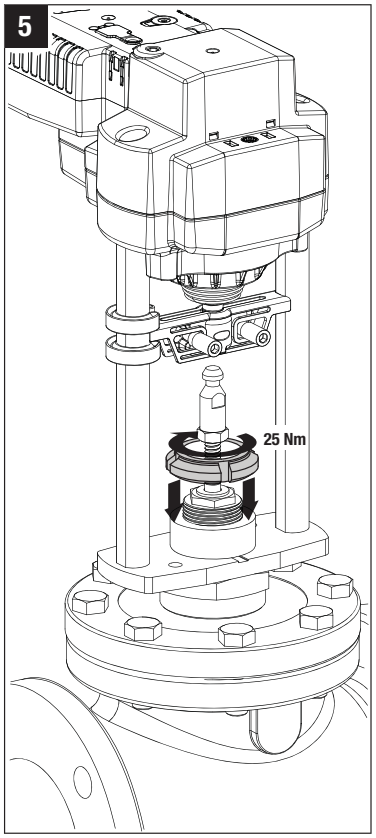
BELIMO

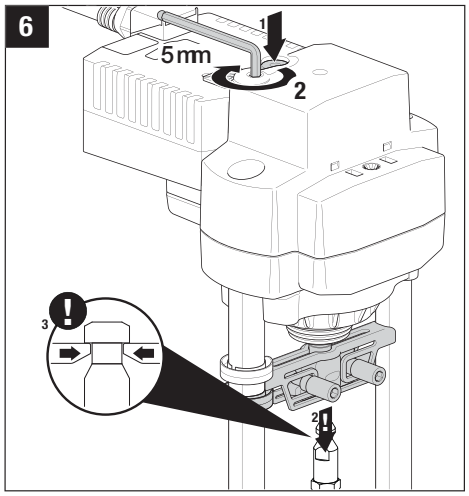


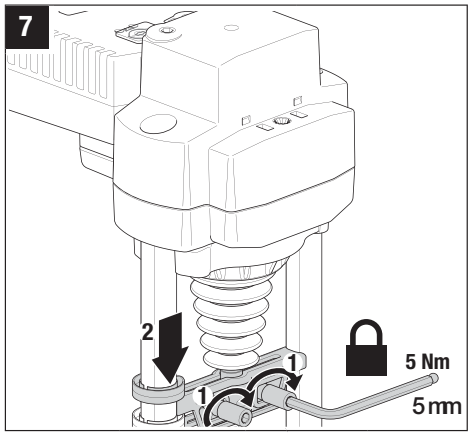


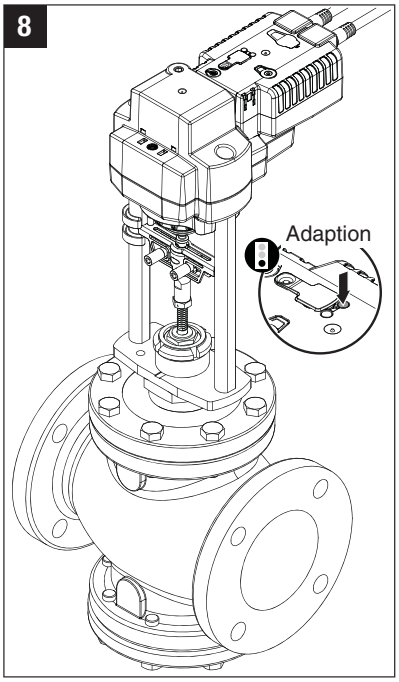


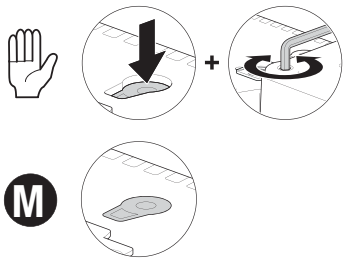












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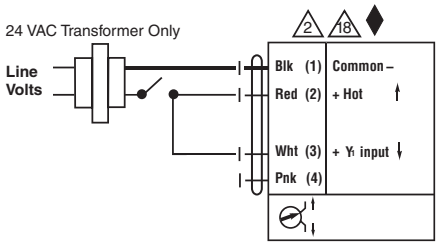
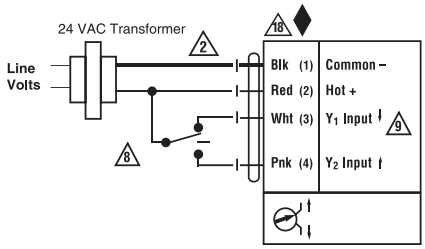
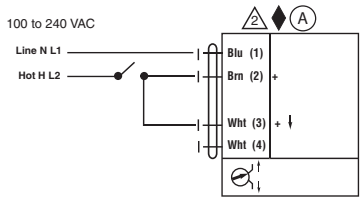
Electronic Fail-Safe Actuator with -3



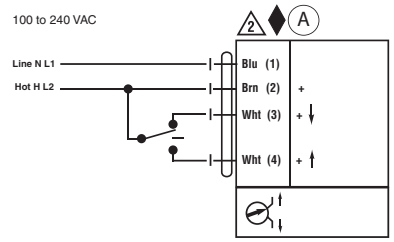
On/Off



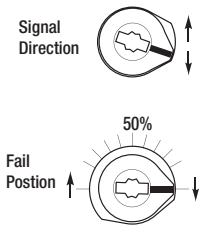
Floating Point



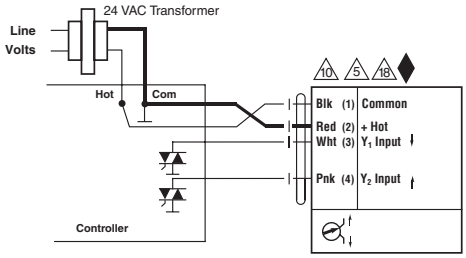
On/Off



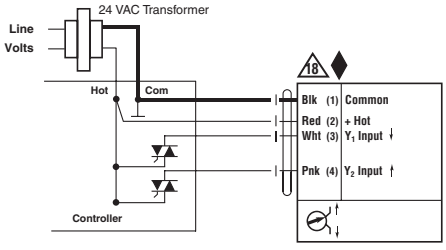
Floating Point



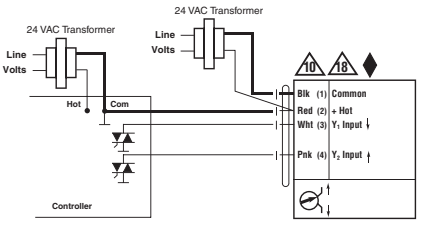
Selector Switches



Triac Sink

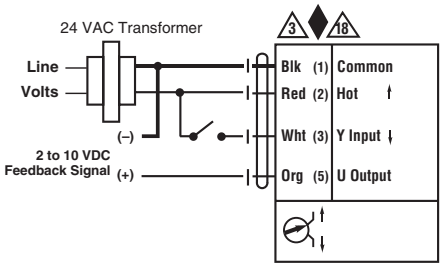


Triac Source

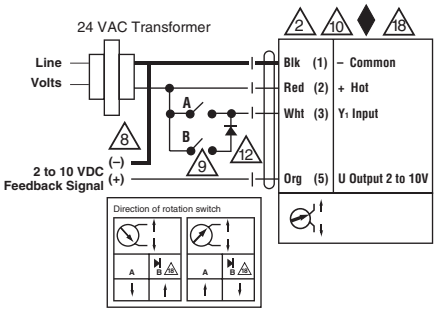


Triac Sink with Separate Transformer

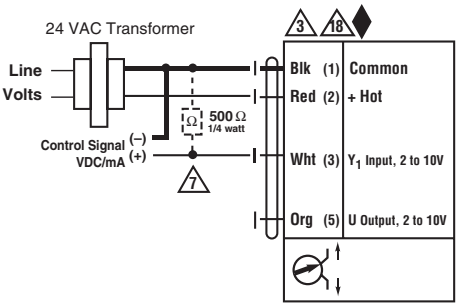
Electronic Fail-Safe Actuator with MFT



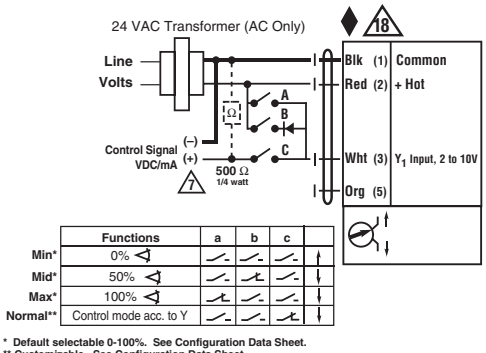
On/Off



Floating Point



VDC / 4 to 20 mA



Functions	a	b	c	
Min* 0%				
Mid* 50%				
Max* 100%				
Normal** Control mode acc. to Y				

* Default selectable 0-100%. See Configuration Data Sheet.
** Customizable. See Configuration Data Sheet.

Override Control Min, Mid, Max Postions

Notes:

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- Ⓐ Actuators with appliance cables are numbered.
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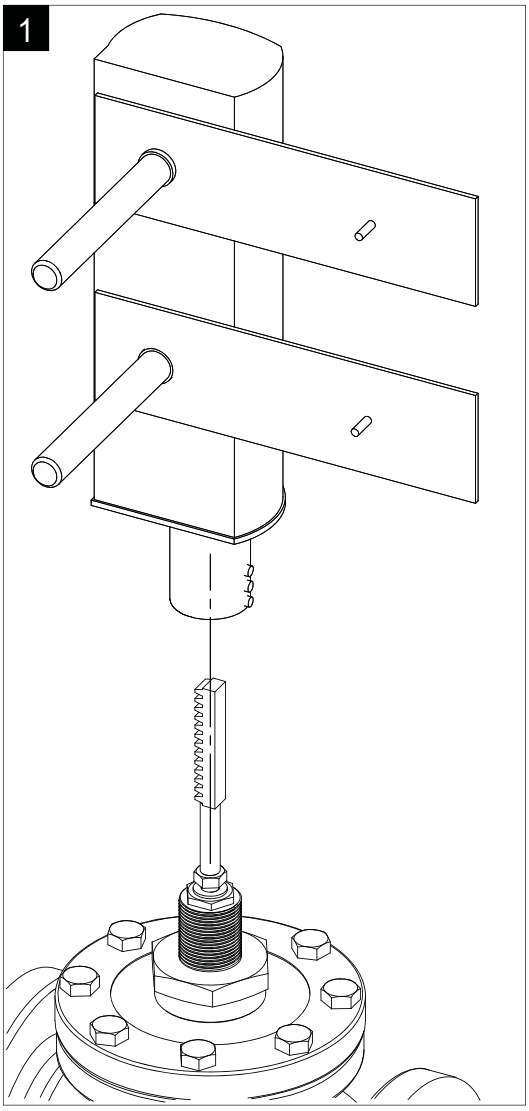
BRN Brown Marron Brun Marrom
BLU Blue Azul Bleu Azul
ORG Orange Anaranjado Orange Alaranjado
PNK Pink Rosado Rosa Cor-de ros
WHT White Blanco Blanc Branco
RED Red Rojo Rouge Vermelho
BLK Black Negro Noir Preto

1



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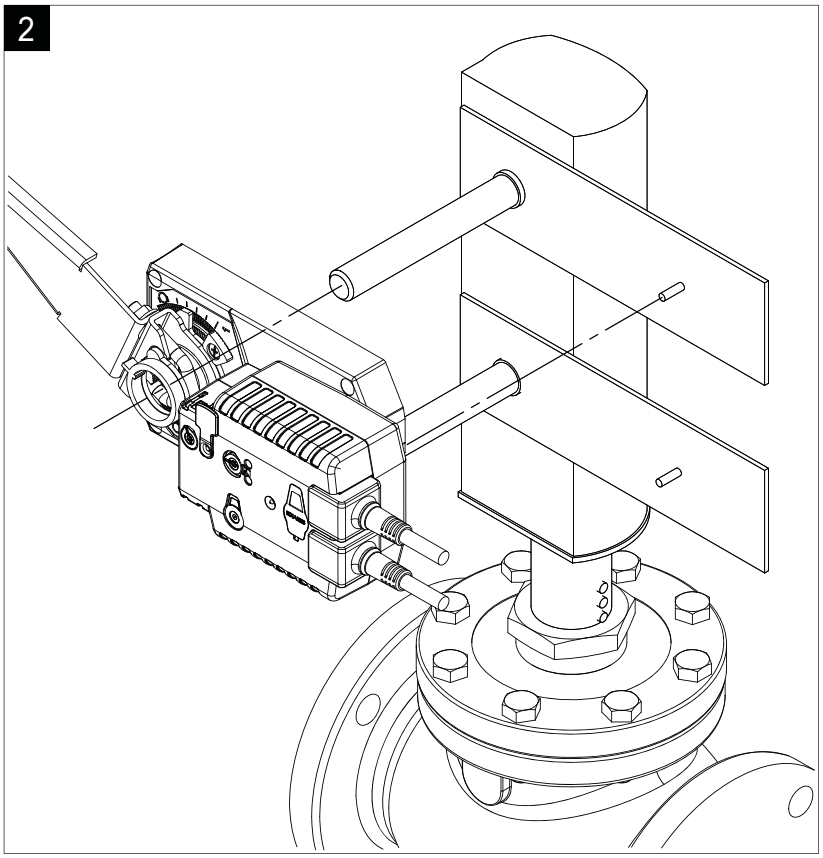

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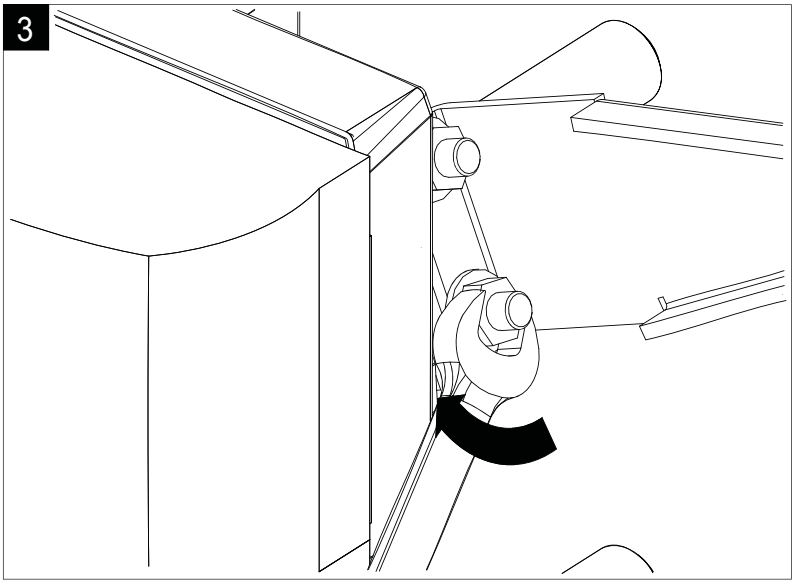

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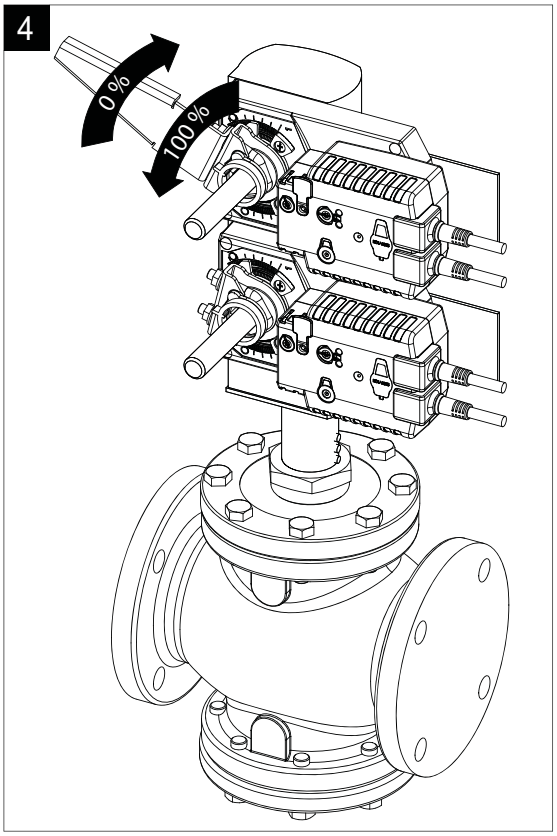

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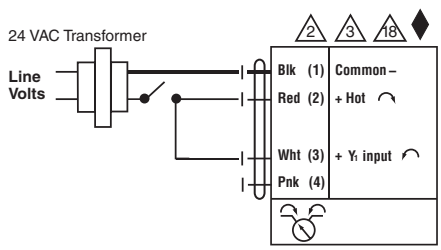
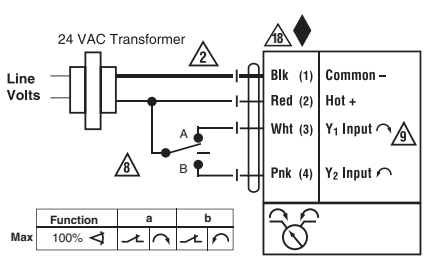
G6/G7 Globe Valves with Dual Mount GK-X1 Actuators

Wiring Diagrams

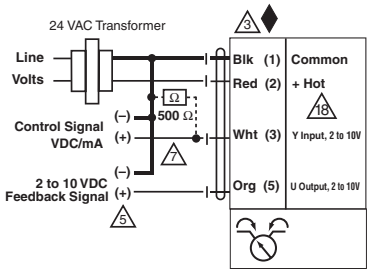
Electronic Fail-Safe Actuator with -3 and -SR



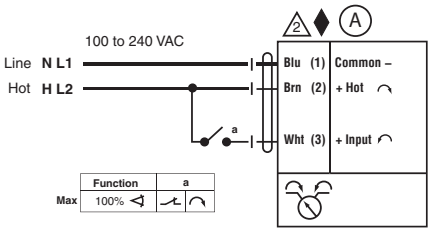
On/Off



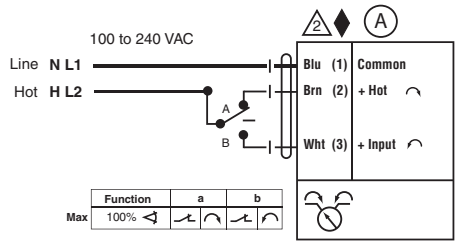
Floating Point


24 VAC Transformer
Line Volts
Control Signal VDC/mA
2 to 10 VDC Feedback Signal
500 Ω
Blk (1) Common
Red (2) + Hot
Wht (3) Y Input, 2 to 10V
Org (5) U Output, 2 to 10V

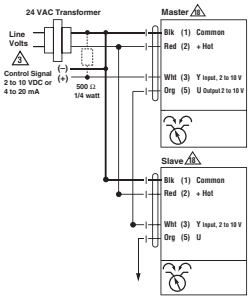
VDC / 4 to 20 mA



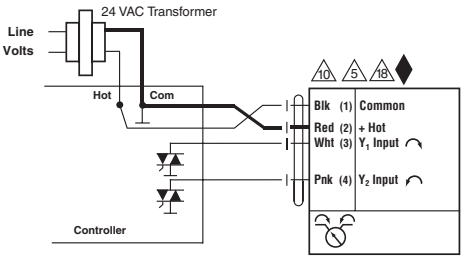
On/Off



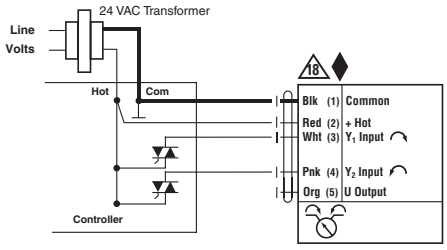
Floating Point



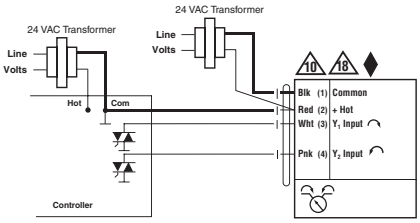
VDC/ 4 to 20 mA (Master Slave)



Triac Sink

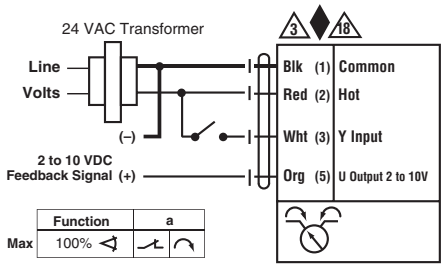


Triac Source

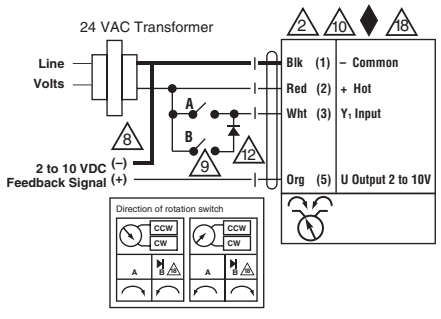


Triac Sink with Separate Transformer

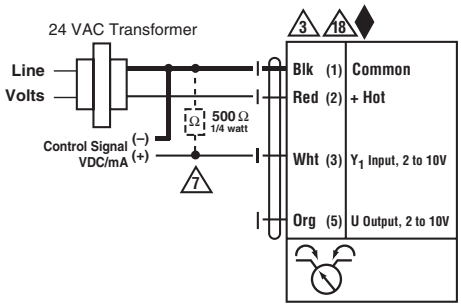
Electronic Fail-Safe Actuator with MFT



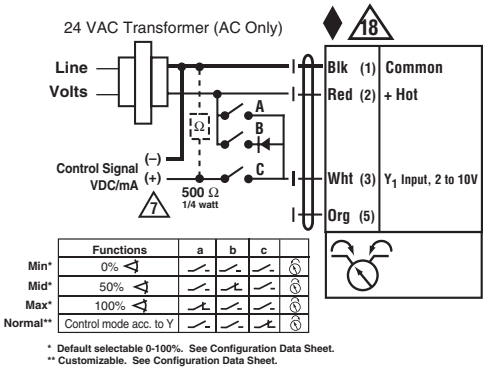
On/Off



Floating Point


24 VAC Transformer
Line Volts
Control Signal VDC/mA
500 Ω 1/4 watt
Blk (1) Common
Red (2) + Hot
Wht (3) Y1 Input, 2 to 10V
Org (5) U Output, 2 to 10V

VDC / 4 to 20 mA



* Default selectable 0-100%. See Configuration Data Sheet.
** Customizable. See Configuration Data Sheet.

Override Control Min, Mid, Max Postions

Notes:

- ♦ Meets cULus requirements without the need of an electrical ground connection
- Ⓐ Actuators with appliance cables are numbered.
- △2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- △3 Actuators may also be powered by 24 VDC.
- △5 Only connect common to neg. (-) leg of control circuits.
- △7 A 500 Ω resistor converts the 4 to 20 mA control signal to 2 to 10 VDC.
- △8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.
- △9 Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.
- △10 For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.
- △12 IN4004 or IN4007 diode. (IN4007 supplied, Belimo Part number 40155)
- △18 Actuators with plenum rated cable do not have numbers on wires; use color codes instead.

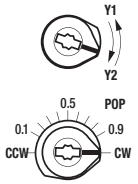
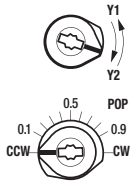
BRN	Brown	Marron	Brun	Marrom
BLU	Blue	Azul	Bleu	Azul
ORG	Orange	Anaranjado	Orange	Alaranjado
PNK	Pink	Rosado	Rosa	Cor-de ros
WHT	White	Blanco	Blanc	Branco
RED	Red	Rojo	Rouge	Vermelho
BLK	Black	Negro	Noir	Preto

Power-Off Postion

FC	FO
A – AB = 0%	A – AB = 100%

On/Off

24V AC/DC

FC	FO
A – AB = 0%	A – AB = 100%
	

-SR/-MFT

24V AC/DC

3 a (Y1)	4 b (Y2)	FC A – AB = 0%	FO A – AB = 100%

Floating Point

24V AC/DC

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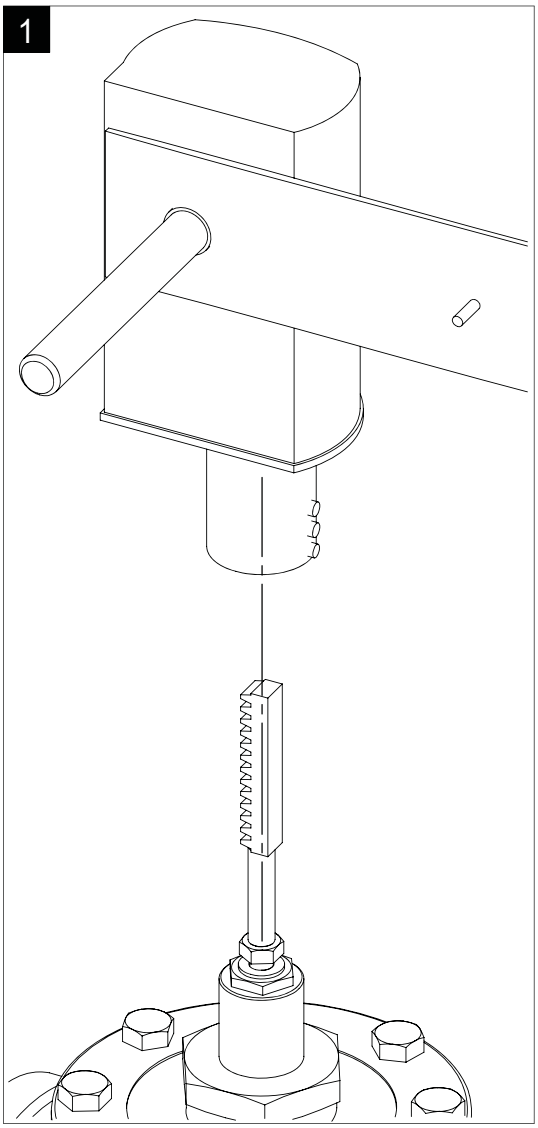
1



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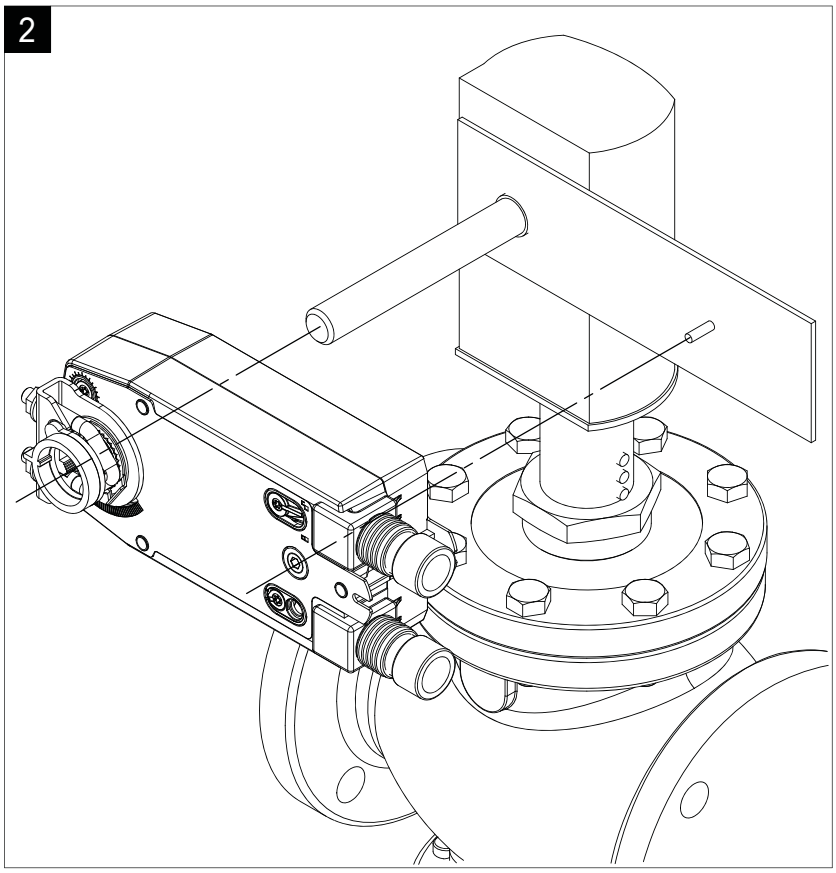

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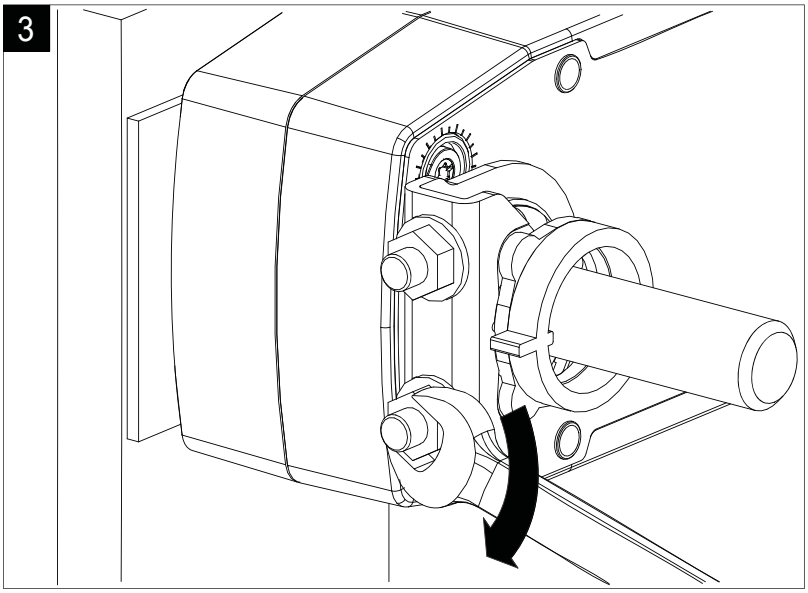

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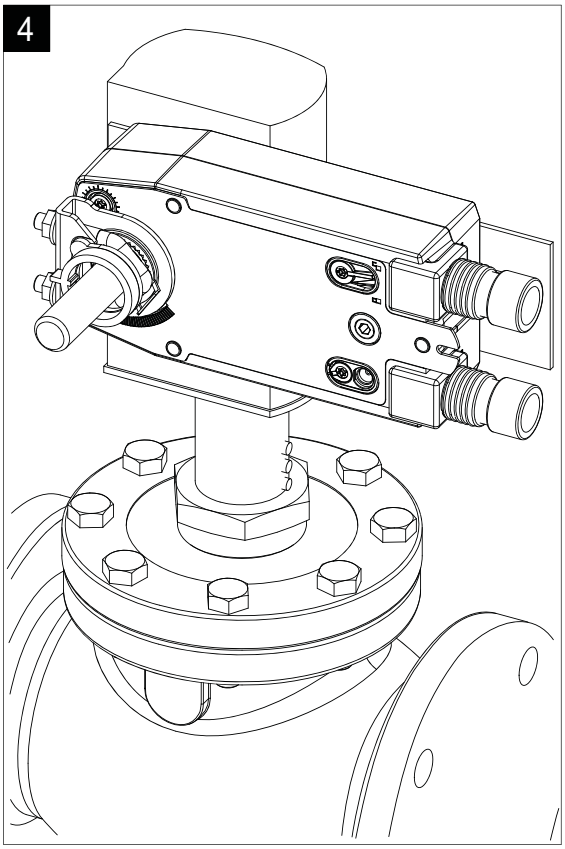

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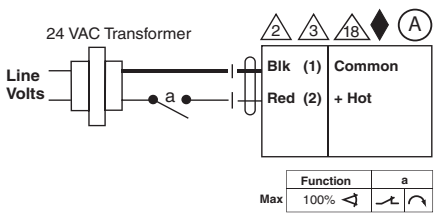
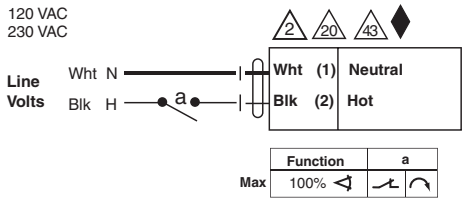
G6/G7 Globe Valves with Single Mount AFX Actuators

Wiring Diagrams

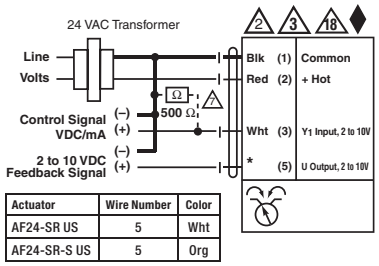
Spring Return Actuator with On/Off, Floating Point and -SR



On/Off



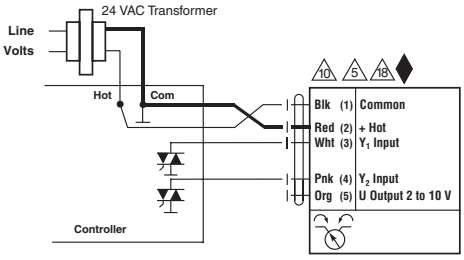
24 VAC up to 240 VAC


24 VAC Transformer
Line Volts
Control Signal VDC/mA
2 to 10 VDC Feedback Signal
500 Ω
Blk (1) Common
Red (2) + Hot
Wht (3) Y1 Input, 2 to 10V
(5) U Output, 2 to 10V

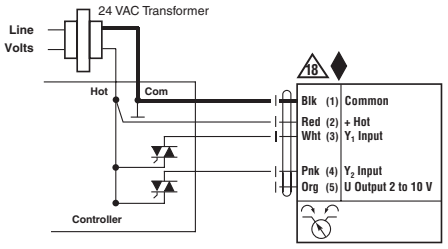
Actuator	Wire Number	Color
AF24-SR US	5	Wht
AF24-SR-S US	5	Org

VDC / 4 to 20 mA

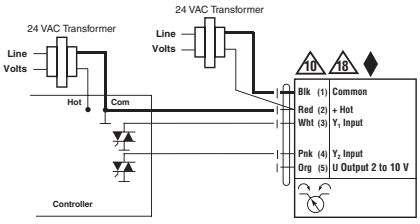
Spring Return Actuator with MFT



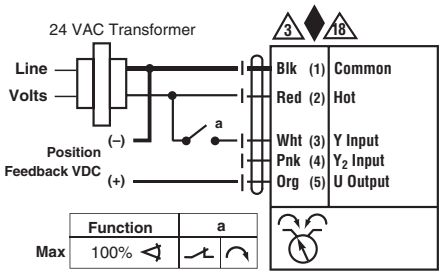
Triac Sink



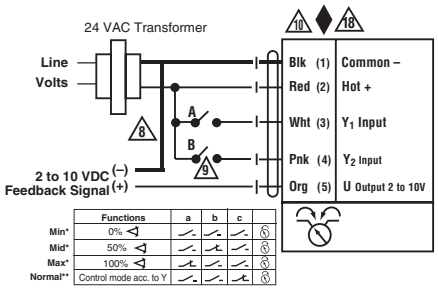
Triac Source



Triac Sink with Separate Transformer

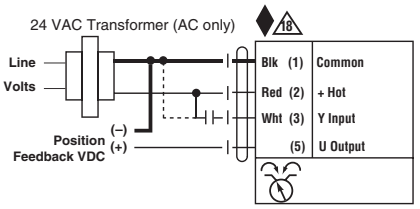


On/Off

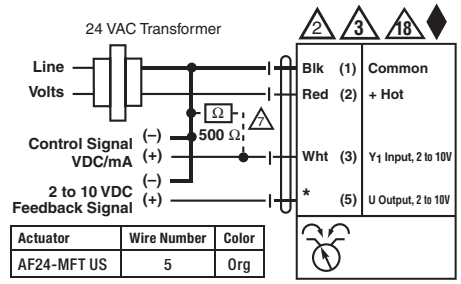


* Default selectable 0-100%. See Configuration Data Sheet.
** Customizable. See Configuration Data Sheet.

Floating Point

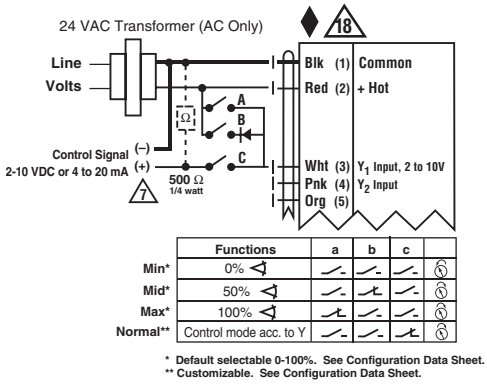


PWM


24 VAC Transformer
Line Volts
Control Signal VDC/mA
2 to 10 VDC Feedback Signal
500 Ω
Blk (1) Common
Red (2) + Hot
Wht (3) Y1 Input, 2 to 10V
(5) U Output, 2 to 10V

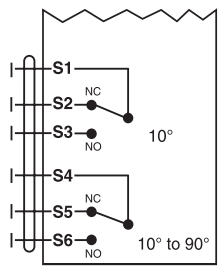
Actuator	Wire Number	Color
AF24-MFT US	5	Org

VDC / 4 to 20 mA


24 VAC Transformer (AC Only)
Line Volts
Control Signal 2-10 VDC or 4 to 20 mA
500 Ω 1/4 watt
Blk (1) Common
Red (2) + Hot
Wht (3) Y1 Input, 2 to 10V
Pnk (4) Y2 Input
Org (5)
Functions a b c
Min* 0%
Mid* 50%
Max* 100%
Normal** Control mode acc. to Y

* Default selectable 0-100%. See Configuration Data Sheet.
** Customizable. See Configuration Data Sheet.

Override Control Min, Mid, Max Postions



Auxiliary Switches

Notes:

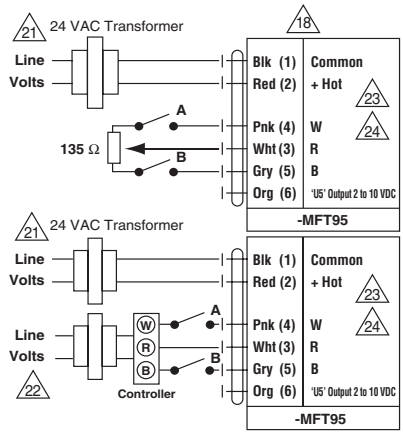
- ♦ Meets cULus requirements without the need of an electrical ground connection
- Ⓐ Actuators with appliance cables are numbered.
- △2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- △3 Actuators may also be powered by 24 VDC.
- △5 Only connect common to neg. (-) leg of control circuits.
- △7 A 500 Ω resistor converts the 4 to 20 mA control signal to 2 to 10 VDC.
- △8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.
- △9 Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.
- △10 For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.
- △11 Actuators may be connected in parallel if not mechanically mounted to the same shaft. Power consumption and input impedance must be observed.
- △18 Actuators with plenum rated cable do not have numbers on wires; use color codes instead.
- △20 All 120 VAC, 230 VAC, and UP actuators use appliance rated cables.
- △43 UP models use "L" instead of "H" on #2 wire.

GRN	Green	Verde	Vert	Verde
ORG	Orange	Anaranjado	Orange	Alaranjado
PNK	Pink	Rosado	Rosa	Cor-de ros
WHT	White	Blanco	Blanc	Branco
RED	Red	Rojo	Rouge	Vermelho
BLK	Black	Negro	Noir	Preto

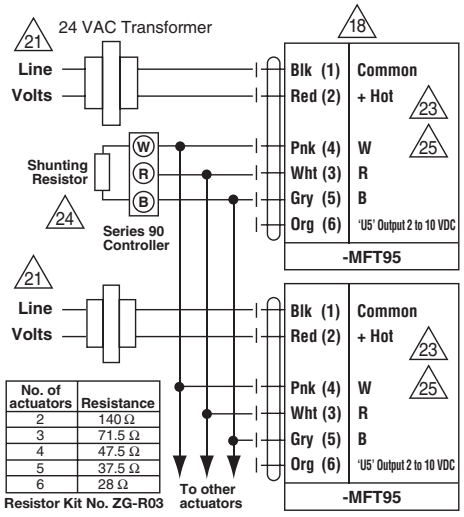
MFT95

Switch A	Switch B	Damper Position
		Damper Open
		Damper Closed

The direction of rotation switch is set so that the fail safe position and the position of the damper is closed with no signal at wire R.



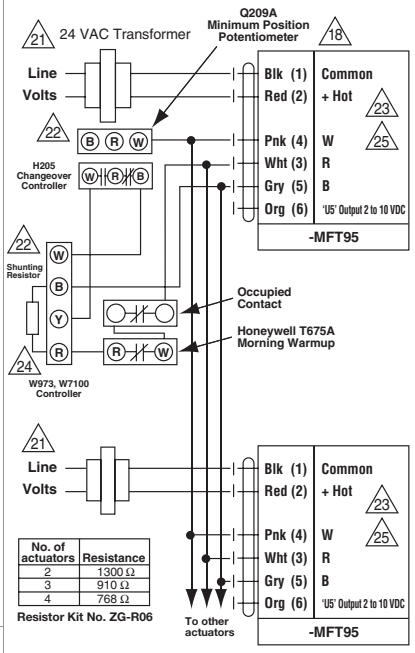
Override



No. of actuators	Resistance
2	140 Ω
3	71.5 Ω
4	47.5 Ω
5	37.5 Ω
6	28 Ω

Resistor Kit No. ZG-R03

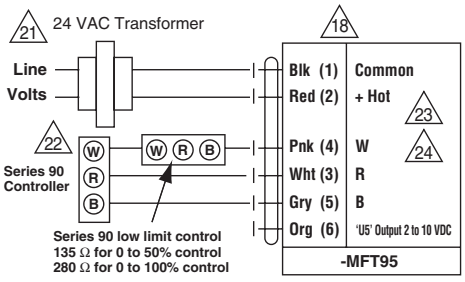
Wiring multiple actuators to a Series 90 Controller



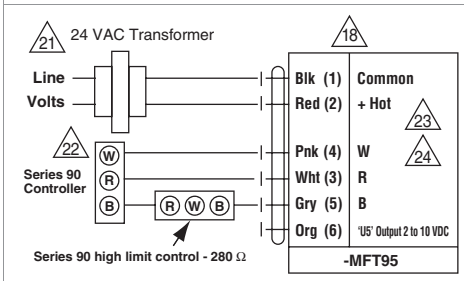
No. of actuators	Resistance
2	1300 Ω
3	910 Ω
4	768 Ω

Resistor Kit No. ZG-R06

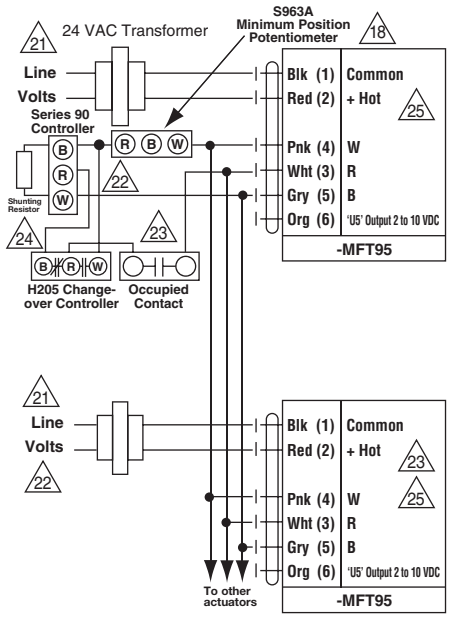
Used with the W973 and W7100 controllers



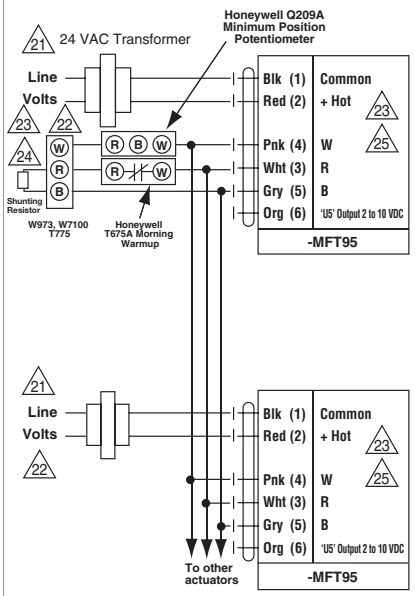
Low Limit Control



High Limit Control



Wiring Multiple Actuators to a Series 90 Controller using Minimum Position Potentiometer



Typical Wiring Diagrams for Multiple Actuators used with the W973, W7100 and T775 controllers

Notes:

18 Actuators with plenum rated cable do not have numbers on wires; use color codes instead.

21 Provide overload protection and disconnect as required.

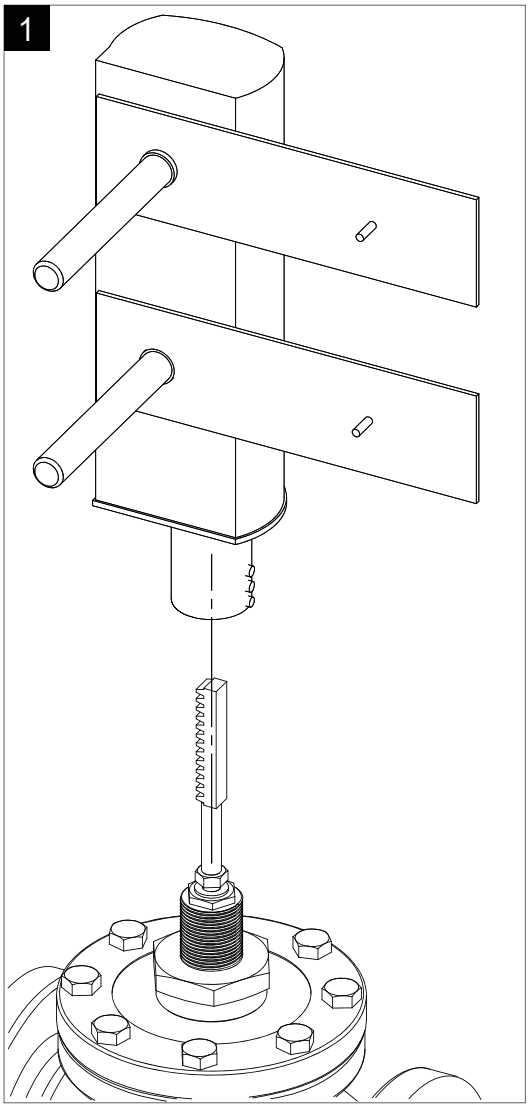
22 Actuators and controller must have separate transformers.

23 Consult controller instruction data for more detailed information.

24 Resistor value depend on the type of controller and the number of actuators. No resistor required for one actuator. Honeywell® resistor kits may be used.

25 To reverse control rotation, use the reversing switch.

1



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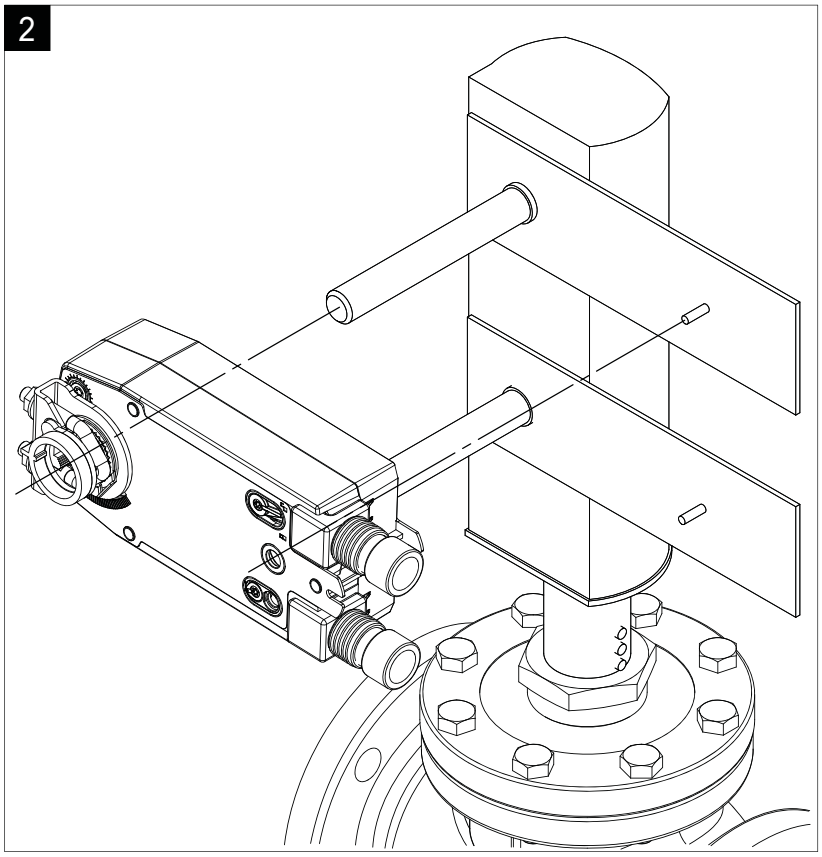

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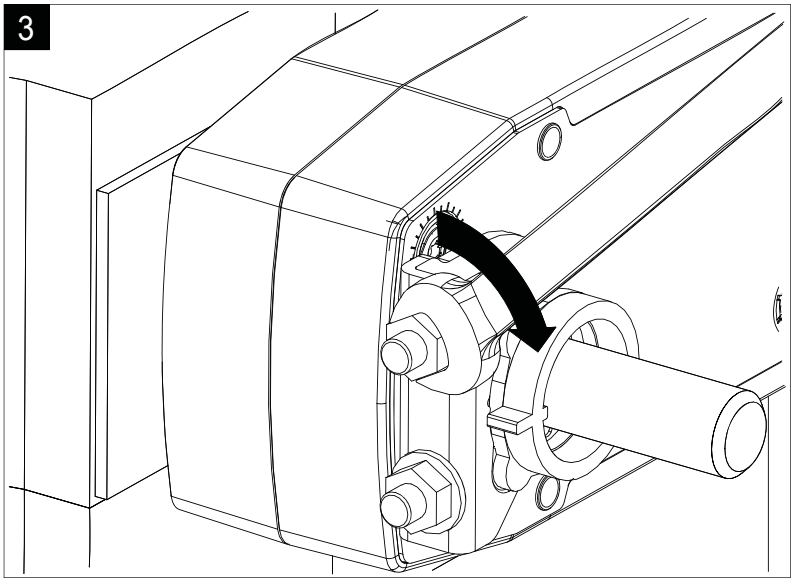

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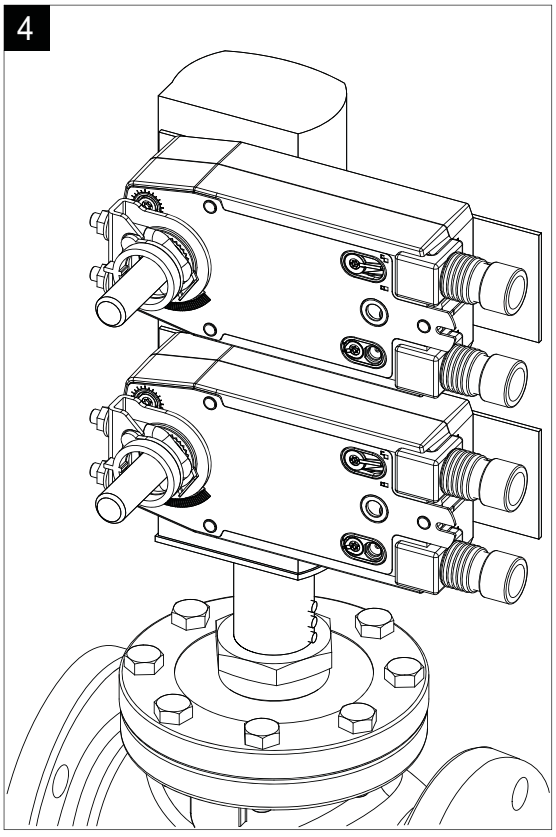

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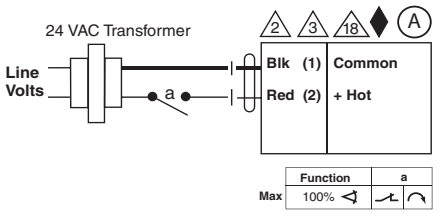
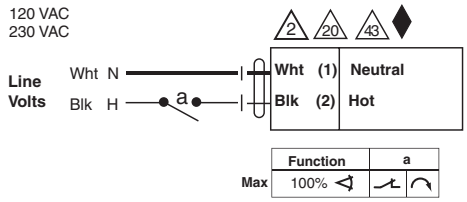
G6/G7 Globe Valves with Dual Mount AFX Actuators

Wiring Diagrams

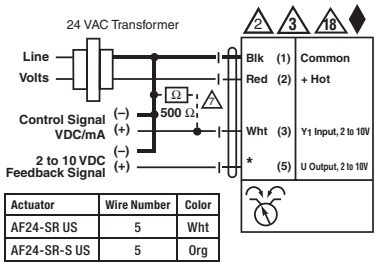
Spring Return Actuator with On/Off, Floating Point and -SR



On/Off



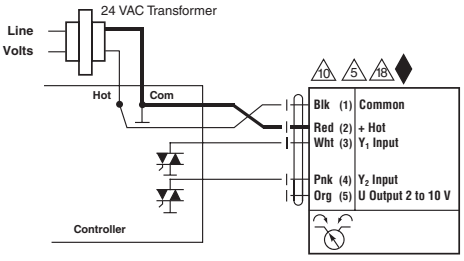
24 VAC up to 240 VAC



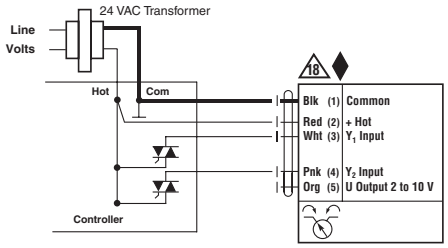
Actuator	Wire Number	Color
AF24-SR US	5	Wht
AF24-SR-S US	5	Org

VDC / 4 to 20 mA

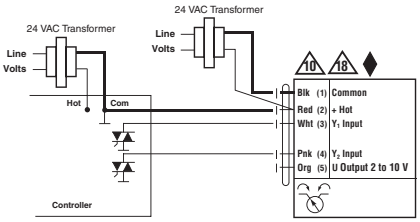
Spring Return Actuator with MFT



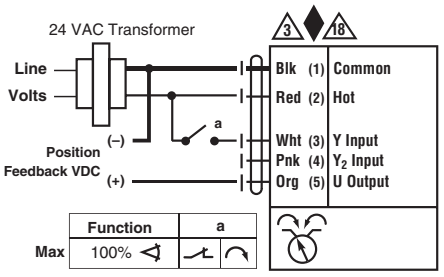
Triac Sink



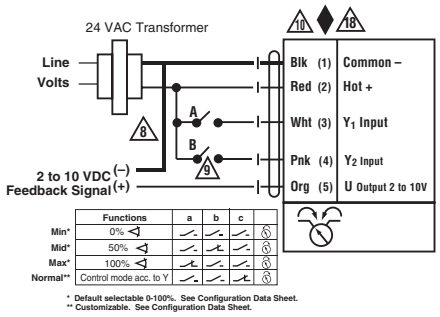
Triac Source



Triac Sink with Separate Transformer

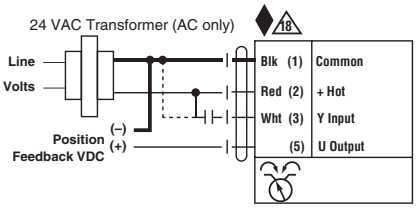


On/Off

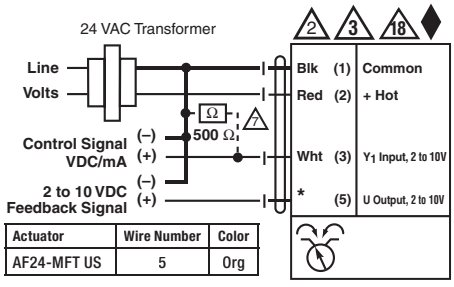


* Default selectable 0-100%. See Configuration Data Sheet.
** Customizable. See Configuration Data Sheet.

Floating Point

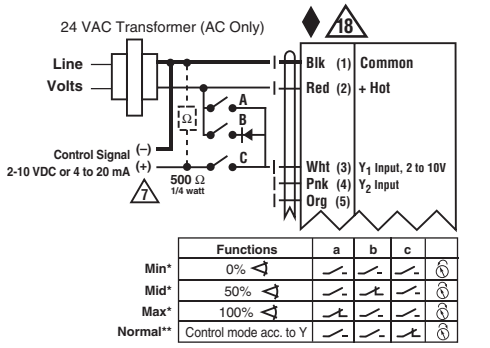


PWM



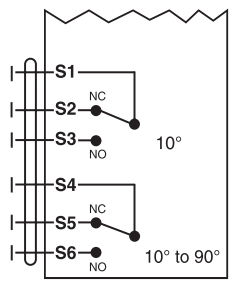
Actuator	Wire Number	Color
AF24-MFT US	5	Org

VDC / 4 to 20 mA

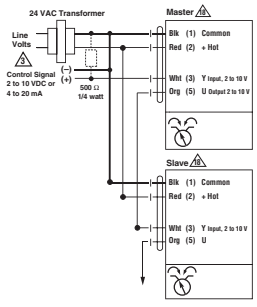


* Default selectable 0-100%. See Configuration Data Sheet.
** Customizable. See Configuration Data Sheet.

Override Control Min, Mid, Max Postions



Auxiliary Switches



VDC / 4 to 20 mA (Master/Slave)

Notes:

- ♦ Meets cULus requirements without the need of an electrical ground connection
- Ⓐ Actuators with appliance cables are numbered.
- △2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- △3 Actuators may also be powered by 24 VDC.
- △5 Only connect common to neg. (-) leg of control circuits.
- △7 A 500 Ω resistor converts the 4 to 20 mA control signal to 2 to 10 VDC.
- △8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.
- △9 Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.
- △10 For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.
- △18 Actuators with plenum rated cable do not have numbers on wires; use color codes instead.
- △20 All 120 VAC, 230 VAC, and UP actuators use appliance rated cables.
- △43 UP models use "L" instead of "H" on #2 wire.

GRN Green Verde Vert Verde
ORG Orange Anaranjado Orange Alaranjado
PNK Pink Rosado Rosa Cor-de ros
WHT White Blanco Blanc Branco
RED Red Rojo Rouge Vermelho
BLK Black Negro Noir Preto

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